

IN THE CLAIMS:

Please cancel claims 3, 4, 7, 12, 14, without prejudice.

Please amend and add new claims as follows:

1 1. (Currently Amended) A ~~An intermediate~~ network device for use in a computer
2 network carrying network traffic, the intermediate network device comprising:
3 a traffic scheduler having one or more resources for use in forwarding network
4 traffic received at the device at different rates;
5 a classification engine configured to identify received network traffic based upon
6 predefined criteria; and
7 a resource reservation engine in communicating relationship with the traffic
8 scheduler and the classification engine,
9 wherein, in response to a first request to reserve resources for a given traffic flow,
10 the resource reservation engine allocates one or more resources to the given traffic flow,
11 but does not make the one or more allocated resources available to the given traffic flow.

1 2. (Currently Amended) The ~~intermediate~~ network device of claim 1 wherein,
2 in response to a second request to reserve resources, the resource reservation engine
3 makes the one or more previously allocated resources available to the given traffic flow.

3. (Cancelled)

4. (Cancelled)

1 5. (Currently Amended) The ~~intermediate~~ network device of claim 2 [4] wherein:

1 the resource reservation engine utilizes [the] a modified Resource reSerVation
2 Protocol (RSVP) specification standard, and
3 the first and second reservation requests are modified RSVP Reservation (Resv)
4 messages.

1 6. (Currently Amended) The ~~intermediate~~ network device of claim 5 wherein:
2 the first and second modified Resv messages each include a two phase reservation
3 flag,
4 in the first modified Resv message, the two phase reservation flag is asserted, and
5 in the second modified Resv message, the two phase reservation flag is deas-
6 serted.

1 7. (Cancelled)

1 8. (Currently Amended) The ~~intermediate~~ network device of claim 2 [4]
2 wherein packets corresponding to the given traffic flow are forwarded by the device in a
3 best efforts manner after receipt of the first request and prior to receipt of the second re-
4 quest ~~while in the resources allocated state.~~

1 9. (Currently Amended) The ~~intermediate~~ network device of claim 8 wherein
2 packets corresponding to the given traffic flow are forwarded with the one or more allo-
3 cated resources after receipt of the second request ~~while in the resources available state.~~

1 10. (Original) In a computer network having a plurality of entities interconnected
2 by a plurality of intermediate network devices having one or more resources for use in
3 forwarding network traffic, a method for providing end-to-end resource reservations
4 along a route between two or more entities, the method comprising the steps of:

5 receiving a first resource reservation message at a given intermediate network de-
6 vice disposed along the network route, the first resource reservation message identifying
7 a traffic flow between the two or more entities and requesting a reservation of resources;
8 in response to receiving the first resource reservation message, allocating one or
9 more of the device's resources for use in forwarding network traffic between the two or
10 more entities; and
11 withholding the allocated resources from being applied to the traffic flow between
12 the two or more entities.

1 11. (Original) The method of claim 10 further comprising the step of:
2 receiving a second resource reservation message for the traffic flow between the
3 two or more entities; and
4 in response to receiving the second resource reservation message, making the al-
5 located resources available for use in forwarding the traffic flow between the two or more
6 entities.

1 12. (Cancelled)

1 13. (Currently Amended) The method of claim 11 ~~12~~ wherein the first and sec-
2 ond resource reservation messages are modified Resource reSerVation Protocol (RSVP)
3 Reservation (Resv) messages.

1 14. (Cancelled)

1 15. (Original) The method of claim 11 ~~[14]~~ wherein the steps of allocating re-
2 sources, withholding resources and making allocated resources available are performed at
3 each intermediate network device disposed along the route between the two or more enti-
4 ties.

1 16. (Original) A method for providing resource reservations along a route through
2 a computer network between two or more entities, the method comprising the steps of:
3 generating a first resource reservation message identifying a traffic flow and re-
4 questing a reservation of resources;
5 configuring the first resource message to include a two phase reservation flag; and
6 asserting the two phase reservation flag so that resources within the network will
7 be allocated, but not made available to the identified traffic flow.

1 17. (Currently Amended) The method of claim 16 further comprising the steps of:
2 generating a second resource reservation message identifying the traffic flow;
3 configuring the second resource message to include a two phase reservation flag;
4 and
5 deasserting the two phase reservation flag so that the allocated resources are made
6 available for application to the identified traffic flow.

Please add new claims 18 *et seq.* as follows:

- 1 18. (New) The network device of claim 2, further comprising:
2 a timer to measure a predetermined time period, wherein the resource reservation
3 engine discards the resources if the second reservation message is not received prior to
4 expiration of the predetermined time period.
- 1 19. (New) A router, comprising:
2 means for receiving a first resource reservation message, the first resource reser-
3 vation message identifying a traffic flow between two or more entities requesting a reser-
4 vation of resources;
5 means for allocating, in response to the first resource reservation message, one or
6 more of the router's resources for use in forwarding network traffic between the two or
7 more entities, but not making available the one or more router's resources to the identi-
8 fied traffic flow;
9 means for receiving a second resource reservation message; and
10 means for making available, in response to the second resource reservation mes-
11 sage, the one or more router's resources to the identified traffic flow.
- 1 20. (New) A computer readable media, comprising:
2 the computer readable media having information written thereon, the information
3 having instructions for execution on a processor for the practice of a method for operating
4 a router, the method having the steps of,
5 receiving a first resource reservation message, the first resource reservation mes-
6 sage identifying a traffic flow between two or more entities requesting a reservation of
7 resources;
8 allocating, in response to the first resource reservation message, one or more of
9 the router's resources for use in forwarding network traffic between the two or more enti-

10 ties, but not making available the one or more router's resources to the identified traffic
11 flow;
12 receiving a second resource reservation message; and
13 making available, in response to the second resource reservation message, the one
14 or more router's resources to the identified traffic flow.

1 21. (New) A method for operating a router, comprising:
2 generating a first resource reservation message identifying a traffic flow for which
3 a resource reservation is requested along a network path between two entities; and
4 indicating by the first resource reservation message that resources within the net-
5 work are requested to be allocated, but not made available to the identified traffic flow.

1 22. (New) The method of claim 21 further comprising:
2 generating a second resource reservation message identifying the traffic flow; and
3 indicating by the second resource reservation message that the allocated resources
4 are to be made available for application to the identified traffic flow.

1 23. (New) The method of claim 22 further comprising:
2 discarding the resources upon expiration of a predetermined time period, if the
3 second reservation message is not received prior to expiration of the predetermined time
4 period.

1 24. (New) A router, comprising:

2 means for generating a first resource reservation message identifying a traffic
3 flow for which a resource reservation is requested along a network path between two en-
4 tities; and

5 means for indicating by the first resource reservation message that resources
6 within the network are requested to be allocated, but not made available to the identified
7 traffic flow.

1 25. (New) The router of claim 24 further comprising:

2 means for generating a second resource reservation message identifying the traffic
3 flow; and

4 means for indicating by the second resource reservation message that the allo-
5 cated resources are to be made available for application to the identified traffic flow.

1 26. (New) The router of claim 25 further comprising:

2 means for discarding the resources upon expiration of a predetermined time pe-
3 riod, if the second reservation message is not received prior to expiration of the prede-
4 termined time period.

1 27. (New) A computer readable media, comprising:

2 the computer readable media having information written thereon, the information
3 having instructions for execution on a processor for the practice of a method for provid-
4 ing resource reservations along a route between two or more entities, the method having
5 the steps of,

6 generating a first resource reservation message identifying a traffic flow to re-
7 quest a reservation of resources in a network between two or more entities; and

8 indicating by the first resource reservation message that resources within the net-
9 work will be allocated, but not made available to the identified traffic flow.

1 28. (New) A system to establish a voice connection through a computer network, com-
2 prising:
3 a source voice agent to send a first resource reservation message indicating an ad-
4 dress of a destination voice agent;
5 a first router receiving the first resource reservation message, the first router de-
6 termining a first hop of a route to the destination voice agent;
7 a plurality of intermediate routers to establish a path through the network from the
8 source voice agent to the destination voice agent;
9 a last router connected to a destination voice agent, wherein the first router, the
10 plurality of intermediate routers, the last router, in response to the first resource reserva-
11 tion message, allocate resources to a traffic flow from the source voice agent to the desti-
12 nation voice agent, but do not make available the resources to the traffic flow, wherein
13 the destination voice agent transmits a second resource reservation message to the source
14 voice agent, the second resource reservation message making available resources to the
15 traffic flow.

1 29. (New) The system of claim 28 further comprising:
2 a timer, the time to measure a predetermined time period, upon expiration of the
3 predetermined time period, the resources are discarded if the second resource reservation
4 message is not received prior to expiration of the predetermined time period.

1 30. (New) The system of claim 28 wherein the destination voice agent, in response to re-
2 ceiving the first resource reservation message, transmits the second resource reservation
3 message.

1 31. (New) A method for establishing a voice connection through a computer network,
2 comprising:
3 sending, by a source voice agent, a first resource reservation message indicating
4 an address of a destination voice agent;
5 receiving, by a first router, the first resource reservation message, the first router
6 determining a first hop of a route to the destination voice agent;
7 establishing, by a plurality of intermediate routers, a path from the source voice
8 agent to the destination voice agent, the path passing through the plurality of intermediate
9 routers;
10 connecting a last router to a destination voice agent, wherein the first router, the
11 plurality of intermediate routers, the last router, in response to the first resource reserva-
12 tion message, allocate resources to a traffic flow from the source voice agent to the desti-
13 nation voice agent, but do not make available the resources to the traffic flow, wherein
14 the destination voice agent transmits a second resource reservation message to the source
15 voice agent, the second resource reservation message making available resources to the
16 traffic flow.

1 32. (New) The method of claim 31 further comprising:
2 discarding the resources upon expiration of a predetermined time period, if the
3 second reservation message is not received prior to expiration of the predetermined time
4 period.

1 33. (New) The method of claim 31 further comprising:
2 transmitting, by the destination voice agent in response to receiving the first re-
3 source reservation message, the second resource reservation message.

1 34. (New) The method of claim 31 further comprising:
2 transmitting, by the destination voice agent in response to a called party picking
3 up a destination telephone, the second resource reservation message.

1 35. (New) A system to establish a voice connection through a computer network, com-
2 prising:
3 means for sending, by a source voice agent, a first resource reservation message
4 indicating an address of a destination voice agent;
5 means for receiving, by a first router, the first resource reservation message, the
6 first router determining a first hop of a route to the destination voice agent;
7 means for establishing, by a plurality of intermediate routers, a path from the
8 source voice agent to the destination voice agent, the path passing through the plurality of
9 intermediate routers;
10 means for connecting a last router to a destination voice agent, wherein the first
11 router, the plurality of intermediate routers, the last router, in response to the first re-
12 source reservation message, allocate resources to a traffic flow from the source voice
13 agent to the destination voice agent, but do not make available the resources to the traffic
14 flow, wherein the destination voice agent transmits a second resource reservation mes-
15 sage to the source voice agent, the second resource reservation message making available
16 resources to the traffic flow.

1 36. (New) The system of claim 35 further comprising:
2 means for discarding the resources upon expiration of a predetermined time pe-
3 riod, if the second reservation message is not received prior to expiration of the prede-
4 termined time period.

1 37. (New) The system of claim 35 further comprising:

2 means for transmitting, by the destination voice agent in response to receiving the
3 first resource reservation message, the second resource reservation message.

1 38. (New) The system of claim 35 further comprising:

2 means for transmitting, by the destination voice agent in response to a called party
3 picking up a destination telephone, the second resource reservation message.

1 39. (New) A computer readable media, comprising:

2 the computer readable media having information written thereon, the information
3 having instructions for execution on a processor for the practice of a method for estab-
4 lishing a voice connection through a computer network, the method having the steps of,
5 sending, by a source voice agent, a first resource reservation message indicating
6 an address of a destination voice agent;

7 receiving, by a first router, the first resource reservation message, the first router
8 determining a first hop of a route to the destination voice agent;

9 establishing, by a plurality of intermediate routers, a path from the source voice
10 agent to the destination voice agent, the path passing through the plurality of intermediate
11 routers;

12 connecting a last router to a destination voice agent, wherein the first router, the
13 plurality of intermediate routers, the last router, in response to the first resource reserva-
14 tion message, allocating resources to a traffic flow from the source voice agent to the des-
15 tination voice agent, but do not make available the resources to the traffic flow, and
16 transmitting, by the destination voice agent, a second resource reservation message to the
17 source voice agent, the second resource reservation message making available resources
18 to the traffic flow.